

Amendments to the Claims

1 Claim 1 (original): A method of enabling data access and manipulation from a pervasive device,
2 comprising steps of:
3 receiving a data access request from a pervasive device;
4 obtaining the requested data;
5 determining what data manipulation operations are available for the obtained data, as well
6 as a location of each available data manipulation operation; and
7 returning the determined data manipulation operations and locations to the pervasive
8 device, in addition to the obtained data.

1 Claim 2 (original): The method according to Claim 1, further comprising steps of:
2 requesting operation of a selected one of the determined data manipulation operations; and
3 performing the requested operation, wherein the performing step is executed by another
4 device on behalf of the pervasive device.

1 Claim 3 (original): The method according to Claim 1, wherein the determining step further
2 comprises determining what data manipulation operations are available for a content type of the
3 obtained data.

1 Claim 4 (original): The method according to Claim 3, wherein the determining step further
2 comprises determining what data manipulation operations are available for a user of the pervasive
3 device.

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1 Claim 5 (original): The method according to Claim 3, wherein the determining step further
2 comprises determining what data manipulation operations are available for a current location of the
pervasive device.

1 Claim 6 (original): The method according to Claim 1, wherein the determining step further
2 comprises determining what data manipulation operations are available for a user of the pervasive
3 device.

1 Claim 7 (original): The method according to Claim 6, wherein the step of determining what data
2 manipulation operations are available for the user of the pervasive device further comprises
3 obtaining information about the user from a protocol header of the data access request.

1 Claim 8 (original): The method according to Claim 6, wherein the step of determining what data
2 manipulation operations are available for the user of the pervasive device further comprises
3 obtaining information about access privileges of the user.

1 Claim 9 (original): The method according to Claim 8, wherein the information about access
privileges of the user is obtained from a repository which stores access privilege information.

1 Claim 10 (original): The method according to Claim 1, wherein the determining step further
2 comprises determining what data manipulation operations are available for a user group of which a
user of the pervasive device is a member.

1 Claim 11 (original): The method according to Claim 1, wherein the determining step further
2 comprises determining what data manipulation operations are available for a current location of the
3 pervasive device.

1 Claim 12 (original): The method according to Claim 11, wherein the step of determining what data
2 manipulation operations are available for the current location of the pervasive device further
3 comprises accessing a global positioning system ("GPS") function of the pervasive device or a
4 location registry associating the pervasive device with a plurality of access points.

1 Claim 13 (original): The method according to Claim 1, wherein the determining step further
2 comprises determining what data manipulation operations are available for the pervasive device.

1 Claim 14 (original): The method according to Claim 13, wherein information used in the step of
2 determining what data manipulation operations are available for the pervasive device is obtained
3 from a protocol header which specifies types of content accepted by the pervasive device.

1 Claim 15 (original): The method according to Claim 13, wherein information used in the step of
2 determining what data manipulation operations are available for the pervasive device is obtained

3 from a protocol header which specifies browser capabilities of a browser operating on the
4 pervasive device.

1 Claim 16 (original): The method according to Claim 13, wherein information used in the step of
2 determining what data manipulation operations are available for the pervasive device is obtained
3 by analyzing capability information provided by the pervasive device.

1 Claim 17 (original): The method according to Claim 13, wherein information used in the step of
2 determining what data manipulation operations are available for the pervasive device is obtained
3 from a repository which specifies capabilities of the pervasive device.

1 Claim 18 (original): The method according to Claim 2, wherein the requested operation is a file
2 storage operation.

1 Claim 19 (original): The method according to Claim 2, wherein the requested operation is a print
2 operation.

1 Claim 20 (original): The method according to Claim 2, wherein the requested operation is one of a
2 fax operation, an e-mail operation, a project operation, or a voice mail application.

1 Claim 21 (original): The method according to Claim 2, further comprising the step of annotating
2 selected ones of the locations of the determined data manipulation operations with an identifier of
3 respective ones of the obtained data.

1 Claim 22 (original): The method according to Claim 2, further comprising the step of annotating
2 selected ones of the returned data manipulation operations and locations with one or more cookies
3 which were present on the received data access request.

1 Claim 23 (original): The method according to Claim 2, further comprising the step of annotating
2 selected ones of the returned data manipulation operations and locations with one or more
3 parameters for use by the performing step.

1 Claim 24 (currently amended): The method according to Claim 23, wherein a selected set of the
2 parameters which are returned to the pervasive device [[and]] are provided in the requesting step
3 and are then used by the performing step.

1 Claim 25 (original): The method according to Claim 23, wherein the annotating step is performed
2 by a protocol proxy component which receives the data access request in the receiving step, and
3 wherein the annotating step is performed prior to operation of the returning step.

1 Claim 26 (original): The method according to Claim 25, wherein the determining and returning
2 steps are performed by the protocol proxy.

1 Claim 27 (original): The method according to Claim 25, wherein the protocol proxy receives
2 requests and transmits responses using Hypertext Transfer Protocol ("HTTP") messages.

1 Claim 28 (original): The method according to Claim 25, wherein the protocol proxy receives
2 requests and transmits responses using Wireless Session Protocol ("WSP") messages.

1 Claim 29 (original): The method according to Claim 25, wherein the protocol proxy receives
2 requests and transmits responses using Simple Mail Transfer Protocol ("SMTP"), Post Office
3 Protocol ("POP" or "POP3"), or Internet Message Access Protocol ("IMAP") messages.

1 Claim 30 (original): The method according to Claim 25, wherein the protocol proxy receives
2 requests and transmits responses using a synchronization protocol.

1 Claim 31 (original): The method according to Claim 25, wherein the protocol proxy is configured
2 to accept requests from the pervasive device.

1 Claim 32 (original): The method according to Claim 25, wherein the protocol proxy and the
2 pervasive device communicate through a wireless access point.

1 Claim 33 (original): The method according to Claim 2, wherein:

2 the locations comprise address information for each determined data manipulation
3 operation;

4 the requesting operation step further comprises issuing a request using the address
5 information of the selected data manipulation operation; and

6 the performing step further comprises executing a service which is located using the
7 address information of the issued request.

1 Claim 34 (original): The method according to Claim 1, wherein the returning step further
2 comprises returning at least one graphical symbol or icon for particular ones of the returned data
3 manipulation operations and locations.

1 Claim 35 (original): The method according to Claim 1, wherein the determining step further
2 comprises accessing a data structure to locate information used by the returning step, wherein the
3 data structure stores information about the data manipulation operations that are available for the
4 obtained data and the location of each available data manipulation operation.

1 Claim 36 (original): The method according to Claim 35, wherein new data manipulation
2 operations are supported for use in the determining step by adding information about the new data
3 manipulation operations and the location of each new data manipulation operation to the data
4 structure.

1 Claim 37 (original): The method according to Claim 1, wherein the determining step further
2 comprises:
3 accessing a data structure to locate information used by the returning step, wherein the data
4 structure stores information about the data manipulation operations that are available for the
5 obtained data; and
6 dynamically determining the location of each available data manipulation operation.

1 Claim 38 (original): The method according to Claim 37, wherein the dynamically determining step
2 further comprises evaluating at least one of current processor load and current network conditions.

1 Claim 39 (original): The method according to Claim 2, wherein the requesting step is performed
2 by a user of the pervasive device.

1 Claim 40 (original): The method according to Claim 2, wherein the requesting step is performed
2 programmatically without intervention of a user of the pervasive device.

1 Claim 41 (original): The method according to Claim 2, further comprising the step of
2 programmatically requesting, by a protocol proxy, a selected data manipulation operation on the
3 obtained data, and wherein the returning step returns a result of the selected data manipulation
4 operation as the obtained data.

1 Claim 42 (original): The method according to Claim 1, further comprising the step of
2 automatically invoking one or more of the determined data manipulation operations.

1 Claim 43 (original): The method according to Claim 42, wherein the automatically invoking step
2 operates before the returning step.

1 Claim 44 (original): The method according to Claim 1, further comprising the steps of:
2 determining one or more selected data manipulation operations that should be performed
3 automatically on the obtained data;
4 performing the selected data manipulation operations on the obtained data, thereby creating
5 transformed data; and
6 using the transformed data as the obtained data for the step of determining what data
7 manipulation operations are available.

1 Claim 45 (original): The method according to Claim 2, further comprising the step of dispatching
2 the requested operation, by a manager which receives the operation request, to the other device
3 prior to operation of the performing step.

1 Claim 46 (original): The method according to Claim 45, further comprising the step of passing
2 information to the manager along with the operation request, wherein the passed information
3 enables the manager to ensure that the performing step operates on data which is identical to the
4 returned data.

1 Claim 47 (original): The method according to Claim 46, wherein the passed information comprises
2 one or more cookies which are present in a header of the data access request.

1 Claim 48 (original): The method according to Claim 1, wherein operation of the steps requires no
2 additional software on the pervasive device.

1 Claim 49 (original): The method according to Claim 1, wherein operation of the steps requires no
2 additional hardware on the pervasive device.

1 Claim 50 (original): A system for enabling data access and manipulation from a pervasive device,
2 comprising:

3 means for receiving a data access request from a pervasive device;
4 means for obtaining the requested data;
5 means for determining what data manipulation operations are available for the obtained
6 data, as well as a location of each available data manipulation operation; and
7 means for returning the determined data manipulation operations and locations to the
8 pervasive device, in addition to the obtained data.

1 Claim 51 (original): The system according to Claim 50, further comprising:
2 means for requesting operation of a selected one of the determined data manipulation
3 operations; and

4 means for performing the requested operation, wherein the means for performing is
5 executed by another device on behalf of the pervasive device.

1 Claim 52 (original): Computer program instructions for enabling data access and manipulation
2 from a pervasive device, the computer program instructions embodied on one or more computer
3 readable media and comprising:

4 computer program instructions for receiving a data access request from a pervasive device;
5 computer program instructions for obtaining the requested data;
6 computer program instructions for determining what data manipulation operations are
7 available for the obtained data, as well as a location of each available data manipulation operation;
8 and

9 computer program instructions for returning the determined data manipulation operations
10 and locations to the pervasive device, in addition to the obtained data.

1 Claim 53 (original): The computer program instructions according to Claim 52, further
2 comprising:

3 computer program instructions for requesting operation of a selected one of the determined
4 data manipulation operations; and

5 computer program instructions for performing the requested operation, wherein the means
6 for performing is executed by another device on behalf of the pervasive device.

1 Claim 54 (original): A method of enabling a pervasive device to access and manipulate remotely-
2 stored data, comprising steps of:
3 receiving a data access request from the pervasive device;
4 obtaining the requested data;
5 determining what data manipulation operations are available for the obtained data, as well
6 as a location of each available data manipulation operation; and
7 returning the determined data manipulation operations and locations to the pervasive
8 device, in addition to the obtained data.

1 Claim 55 (original): A method of accessing and manipulating remotely-stored data from a
2 pervasive device, comprising steps of:
3 requesting an access of the remotely-stored data from the pervasive device; and
4 receiving the requested data at the pervasive device, along with information about one or
5 more data manipulation operations that have been determined to be available for the obtained data.

1 Claim 56 (original): The method according to Claim 56, wherein the information further comprises
2 a location of each available data manipulation operation.

1 Claim 57 (original): The method according to Claim 56, further comprising the step of requesting
2 operation of a selected one of the data manipulation operations.